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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,340	06/05/2001	Patrice Hirtzlin	PF000054	7857

7590 11/19/2003
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EXAMINER

WIMER, MICHAEL C

ART UNIT	PAPER NUMBER
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2821

DATE MAILED: 11/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,340

Applicant(s)

HIRTZLIN ET AL.

Examiner

Michael C. Wimer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4,6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Grybos et al. (5986619).

Regarding Claims 1-4,6 and 9, Grybos et al show a source antenna for TX/RX EM waves comprising an array of "n" radiating elements 22a-d operating in a first frequency band (VHF-137 to 151 MHz) and an element 24 with longitudinal radiation operating in a second frequency band (UHF- 450 MHz) and situated at the center of the array and having an axis coinciding with an axis of radiation of the EM waves, the array of "n" radiating elements and the element with longitudinal radiation having a common phase center, and the "n" radiating elements 22 being arranged symmetrically about the longitudinal radiation element, and all radiating elements consist of a traveling wave antenna, i.e., a helix.

Further regarding Claim 3, the helical antennas 22 and 24 are taught to be sized accordingly to the frequency of operation and to have a conical beam (see col. 3, lines 30-32, for one example)

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Further regarding Claim 4, the helices are arranged so as to form a sequential-rotation array because they are fed by a BFN 26 or 30.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5,8,10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grybos et al. in view of Spencer (5757323).

Grybos et al do not teach the use of components of these claims.

Regarding Claims 5,8,10 and 11, Spencer is cited as resolving the level of ordinary skill in the antenna art and as evidence of obviousness, and shows a printed circuit feed in Fig. 2a-d, a waveguide feed in Fig. 1d for feeding a dielectric rod radiator 3. It would have been obvious to the skilled artisan to employ such feeding and the dielectric radiator in lieu of the inner antenna 24 of Grybos et al. for providing a compact array.

5. Claims 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grybos et al.

Regarding Claim 7, Grybos et al suggest that the elements be 3 or more in number. It would have been obvious to the antenna artisan to employ an 8 element helical array in order to increase gain and narrow the beam pattern.

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Regarding Claim 12, since uplink and downlink frequencies are employed, the separate bands used by Grybos et al. are fully intended to be operated as respective TX and RX bands. A skilled artisan would have found it obvious in Grybos et al as that use is illustrated in Fig. 1.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (703) 305-3555. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K. Wong can be reached on (703) 308-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Michael C. Wimer
Primary Examiner
Art Unit 2821

MCW
11/06/03